US Army Corps of Engineers
St. Paul District

Invasive Species

Description of Problem

Invasive species are non-native plants and animals that have been introduced to ecosystems, become abundant and persist, displacing native species. Invasive species have significant ecological and economic impacts in this region. We deal with these species as part of our land and water stewardship at Corps of Engineers projects, in planning new projects, and in ecosystem restoration efforts.

Asian carp are invading the Upper Mississippi River. Plankton-feeding bighead and silver carp escaped from aquaculture. They grow rapidly up to 60 lbs. Both species have established populations in the Upper Mississippi River as far north as Pool 18. Silver carp leap out of the water when startled, creating a safety hazard for recreational boaters. Mollusk-eating black carp also escaped from aquaculture in Arkansas, Missouri, and Louisiana, and threaten native mussels in the Upper Mississippi River, although there are no known naturally reproducing populations of this species in the river.

Status

The inter-basin connection at the Chicago Sanitary and Ship Canal is a key to limiting introduction of additional invasive aquatic species. An experimental electrical barrier was constructed on the Chicago Sanitary and Ship Canal near Romeoville, Illinois, in 2001, with a second nearby electrical barrier scheduled for construction in 2004. These barriers are intended to separate the Mississippi River Basin from the Great Lakes Basin. The effectiveness of the original barrier is still being tested.

We examined technologies for limiting upriver invasion of Asian carp as part of the Upper Mississippi River–Illinois Waterway Navigation Study. We suggested installing a sound projection array/acoustic bubble curtain system at two Upper Mississippi River dams (Locks and Dams 8, 11, 14, or 15) to test its effectiveness in deterring fish from moving upriver through the navigation locks. Such a fish barrier system, even if effective at deterring fish from entering the navigation locks, would be only temporary at best because carp can swim upriver through the dam gates during larger floods.

Upper Mississippi River System lockmasters can keep the upper lock miter gates closed when vessels are not transiting the locks to limit upriver passage of Asian carp through the locks.

We assisted the Minnesota Department of Natural Resources in a feasibility study on ways to slow the northward invasion of Asian carp up the Upper Mississippi River. Action to slow the invasion of Asian carp is needed soon, or the fish will establish populations in the upper river.

Authority

We have existing authority for water quality, land and water stewardship under our natural resources management authorities. We have the authority to conduct Section 206 cost-shared ecosystem restoration projects, and Section 1135 ecosystem restoration work at existing Corps projects. Funding for new starts under these programs is not currently available. New authority and funding for the Navigation and Environment Sustainability Program (NESP) may be forthcoming.

Fiscal Years 2006-08

Possible NESP funding